

**JURUSAN KEDOKTERAN GIGI
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INTISARI

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PENGARUH PEMBERIAN SUSU KAMBING PERANAKAN ETAWA SELAMA MASA KEHAMILAN TERHADAP KADAR KALSIMUM DAN DENSITAS GIGI ANAK

Kalsium merupakan mineral makro yang berperan sangat penting di dalam tubuh. Kebutuhan kalsium selama kehamilan harus terus dipenuhi karena berperan penting dalam proses pertumbuhan dan perkembangan gigi anak yang dikandung. Susu kambing peranakan Etawa mengandung kalsium tinggi yang dapat diserap oleh tubuh dengan baik. Tujuan penelitian ini adalah mengetahui pengaruh pemberian susu kambing peranakan Etawa selama masa kehamilan terhadap kadar kalsium dan densitas gigi anak tikus. Jenis penelitian ini adalah eksperimental laboratoris. Subjek penelitian adalah 28 tikus *Sprague dawley* yang dibagi menjadi 4 kelompok yaitu kelompok kontrol yang diberi akuades dan kelompok perlakuan yang diberi susu kambing peranakan Etawa dengan dosis 9 ml/kg BB, 18 ml/kg BB, dan 36 ml/kg BB. Unit analisis yaitu anak tikus berusia 15 hari. Densitas gigi diukur dari hasil foto radiografi yang diolah menggunakan *Adobe Photoshop CS5*. Pengukuran kadar kalsium menggunakan *inductively coupled plasma (ICP)*. Normalitas dan homogenitas data dianalisis menggunakan uji *Saphiro-Wilk* dan uji *Levene Test* kemudian diikuti dengan uji *One Way ANOVA*, *Post-Hoc LSD*, dan uji regresi. Rerata kadar kalsium gigi anak tikus pada kelompok yang diberi susu kambing peranakan Etawa selama masa kehamilan berkisar antara $13,334 \pm 3,284\%$ - $33,441 \pm 8,598\%$ sedangkan pada kelompok kontrol sebesar $6,011 \pm 4,066\%$. Rerata densitas gigi anak tikus pada kelompok yang diberi susu kambing peranakan Etawa selama masa kehamilan berkisar antara $151,680 \pm 4,325\text{px}$ - $217,321 \pm 5,903\text{px}$ sedangkan pada kelompok kontrol sebesar $136,558 \pm 20,430\text{px}$. Kadar kalsium dan densitas gigi anak tikus pada kelompok yang diberi susu kambing peranakan Etawa selama masa kehamilan secara signifikan lebih tinggi dibandingkan dengan kelompok kontrol ($p < 0,05$). Kadar kalsium berkorelasi positif dengan densitas gigi anak tikus. Kesimpulan penelitian ini adalah susu kambing peranakan Etawa mampu meningkatkan kadar kalsium dan densitas gigi anak tikus.

Kata Kunci : Masa kehamilan, gigi anak, kadar kalsium gigi, densitas gigi anak, susu kambing peranakan Etawa

Kepustakaan : 60 (1966-2017)

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ABSTRACT

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THE EFFECT OF ETAWA CROSSBRED GOAT MILK DURING PREGNANCY TO THE CALCIUM LEVEL AND DENSITY OF CHILDREN'S TEETH

Calcium is a very important macro mineral component of the body. Homeostasis of calcium during pregnancy should be maintained as it has important role for growth and development of children's bones and teeth. Etawa crossbred goat milk contains a high concentration of calcium which can be absorbed properly in the body. The purpose of this study were to determine the effect of Etawa crossbred goat milk during pregnancy in the calcium level and density of rat pups teeth. This study used an experimental laboratory methods. The subject of this study consisted of 28 *Sprague dawley* rats which were divided into four groups: control group were given aquades and treatment groups were given Etawa goat milk with dose of 9 ml/kg BW, 18 ml/kg BW, and 36 ml/kg BW. The analysis unit were the rat pups aged of 15 days. The density of incisor teeth were measured using radiographic image which was processed using Adobe Photoshop CS5. Calcium level of the teeth were measured using inductively coupled plasma (ICP) method. The normality and homogeneity of data were analyzed using Shapiro-Wilk test and Levene test respectively followed by One Way ANOVA, Post-Hoc LSD, and regression. The mean of calcium level of the rat pups teeth in the treatment groups ranged between $13.334 \pm 3.284\%$ - $33.441 \pm 8.598\%$ while in the control group was $6.011 \pm 4.066\%$. The mean of teeth density of rat pups in the treatment groups ranged between $151.680 \pm 4.325\text{px}$ - $217.321 \pm 5.903\text{px}$ while in the control group was $136.558 \pm 20.430\text{px}$. The calcium level and density of rat pups teeth of the group given Etawa crossbred goat milk during pregnancy were significantly higher than the control group ($p < 0,05$). The calcium level were positively correlated to density of rat pups teeth. In conclusion, Etawa crossbred goat milk capable to improve calcium level and teeth density of rat pups.

Keyword : *Pregnancy, deciduous teeth, calcium level of teeth, density of teeth, Etawa crossbred goat milk*

Bibliography : 60 (1966-2017)